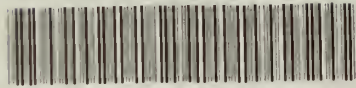


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MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
UMASS/AMHERST
DIVISION OF STD PREVENTION



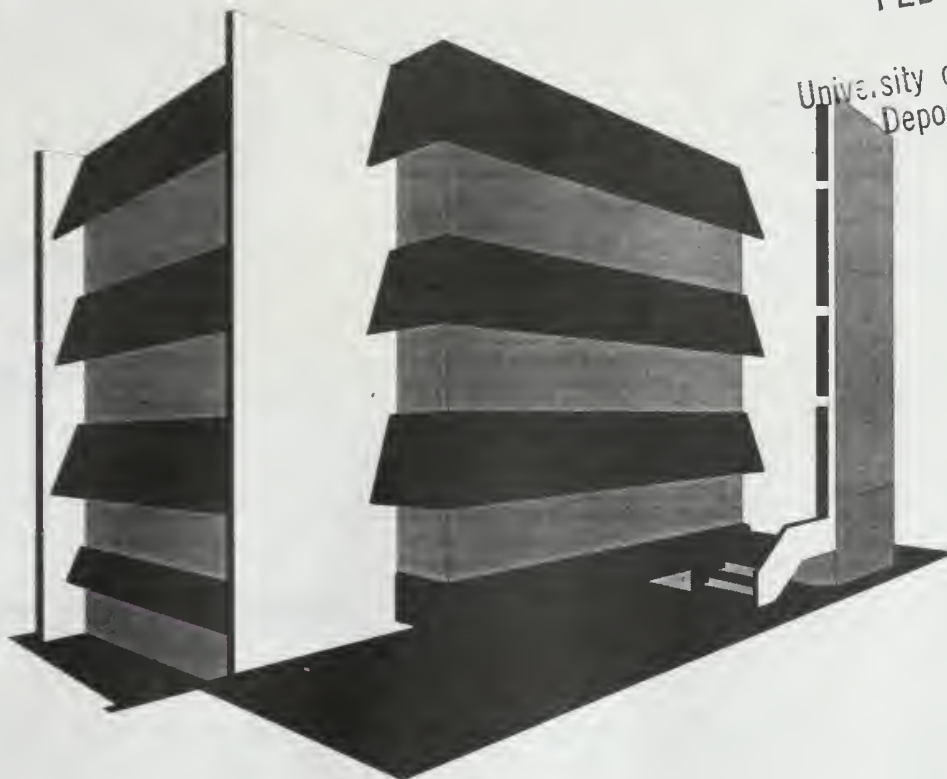
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ADOLESCENT STD REPORT
1996

GOVERNMENT DOCUMENT
COLLECTION

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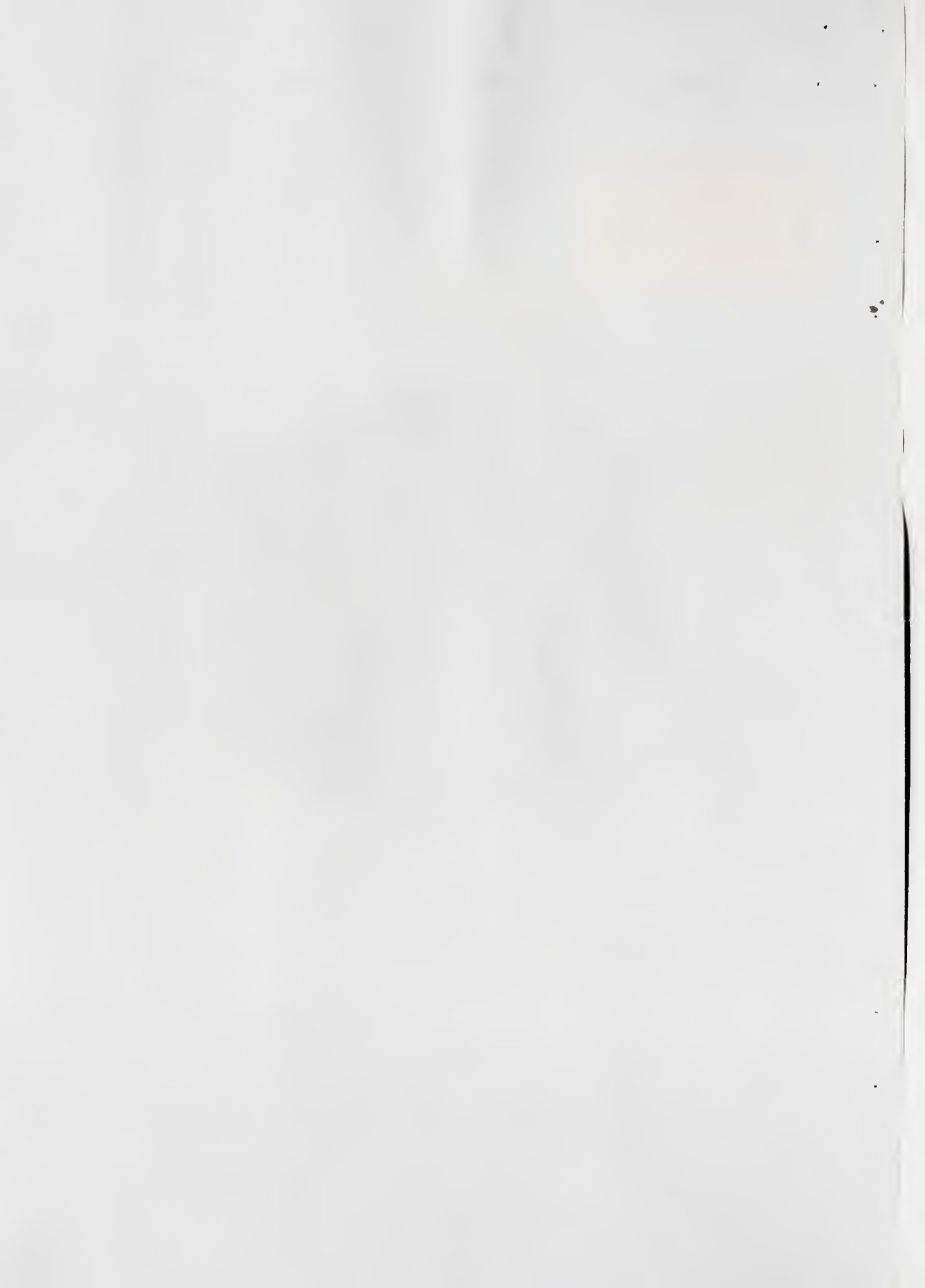


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1996 ADOLESCENT SEXUALLY TRANSMITTED DISEASE IN MASSACHUSETTS

Massachusetts has made considerable progress in reducing the incidence of sexually acquired infections and their sequelae. The statewide epidemiologic trend for the past six years shows significant decreases in incidence rates of STD. Reported gonorrhea in 1996, (2,163 cases) is at the **lowest level of reported gonorrhea since 1959**. Chlamydia became a reportable disease in Massachusetts in 1985. Reported cases in 1996, (6,791) are 33% below the 1989 (10,131) peak level of reported cases.

Overall rates of **syphilis declined 64%** from 28 cases per 100,000 population in 1990 to 10 cases per 100,000 population in 1996. Of greater significance is the decline of **lesion syphilis** (primary and secondary) which **declined 90%** from 11.6 cases per 100,000 population in 1990 to 1.4 cases per 100,000 population in 1996, falling **72% below the HEALTHY PEOPLE 2000 objective** of 5 cases per 100,000.

Gonorrhea rates declined 71% from 125 cases per 100,000 population in 1990 to 36 cases per 100,000 population in 1996, **64% below the National HEALTHY PEOPLE 2000 objective** of 100 cases per 100,000.

Chlamydia rates declined 45% from 204 cases per 100,000 population in 1990 to 113 cases per 100,000 population in 1996 falling **19% below the HEALTHY PEOPLE 2000 objective** of 140 cases per 100,000.

According to the Centers for Disease Control and Prevention (CDC) an estimated 12 million persons acquire a sexually transmitted infection each year in the United States and **two thirds of these sexually transmitted infections occur in persons under 25 years of age**.

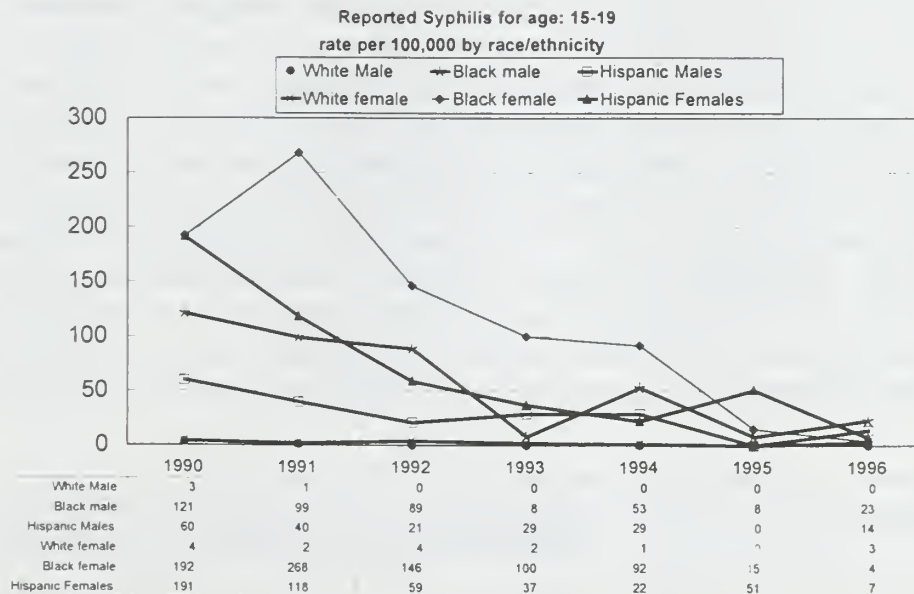
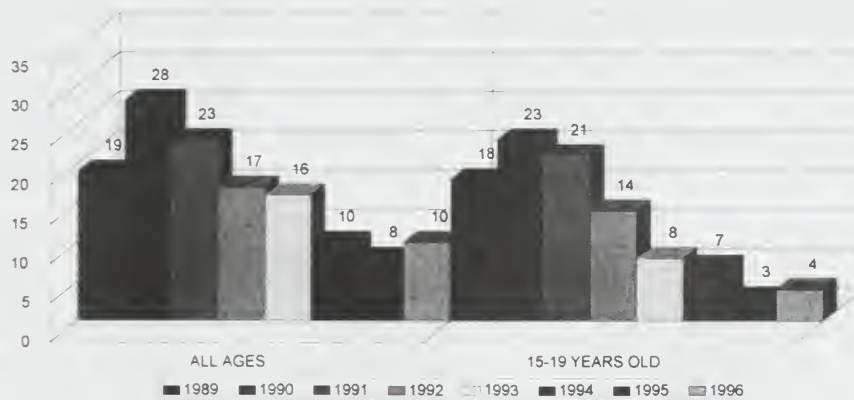
Compared with older adults, adolescents (10 to 19 year olds) and young adults (20 to 24 year olds) are at a higher risk for acquiring STD for a number of reasons: they may be more likely to have multiple (sequential or concurrent) sexual partners rather than a single, long-term relationship; they may be more likely to engage in unprotected intercourse; and they may select partners at higher risk. In addition, for some STDs (e.g., Chlamydia trachomatis) adolescent women may have a physiologically increased susceptibility to infection due to cells present in the cervix and lack of immunity. During the past two decades, the age of initiation of sexual activity has steadily decreased and age at first marriage has increased, resulting in increases in premarital sexual experience among adolescent women and an enlarging pool of young women at risk. In addition, the higher prevalence of STD among adolescents reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, and concerns about confidentiality.

SEXUALLY TRANSMITTED DISEASE IN 15 TO 19 YEAR OLDS

SYPHILIS

- From 1990 to 1996, rates of syphilis decreased 64% in all age groups, and in the 15 to 19 years old rates declined by 85%.
- In 1996, 6% of all cases of early syphilis (primary, secondary and early latent) were reported within the 15 to 19 year age group.
- In 1996, the rate of all syphilis was slightly lower (4 vs. 10) in the 15 to 19 year olds than in the all ages group.

MASSACHUSETTS ALL SYPHILIS
RATE PER 100,000



- Rates were higher in minority teens.
- Rates were higher among women compared men.



SYPHILIS

Syphilis is caused by a corkscrew-shaped bacterium called *Treponema pallidum*. It does not live or cause disease outside the human body and it is spread from person to person through direct contact with an infectious lesion. The spirochetes pass through intact mucous membranes and abraded skin; they are then carried by the blood stream to every organ in the body.

Primary syphilis is the most infectious stage of the disease. The first clinical sign is the chancre, or lesion. The lesion appears at the site of inoculation (21 days average), and is highly infectious, and it resolves without treatment. Primary lesions are not confined to the genital area; they may be seen on the lips, tongue, tonsil, nipple, fingers, and anus depending on sexual practices. Without treatment, the chancre will heal completely within 1 to 5 weeks (3 weeks average). If the lesion has been present > 10 days, nearly all serologic tests will be reactive. The diagnosis of **secondary syphilis** is suspected primarily on the basis of the skin and mucous membrane lesions. The skin lesions are symmetrical and may be macular, papular, follicular, papulosquamous, or pustular. Moist papules occur most frequently in the anogenital region (condylomata lata) and the mouth. Lesions of the mouth, the throat, and the cervix (mucous patches) frequently occur in secondary syphilis, as does generalized lymphadenopathy. Symptoms of secondary syphilis may last 2 to 6 weeks (4 weeks average) and may recur in untreated or inadequately treated patients.

Latent syphilis is the stage in which no observable clinical signs or symptoms are present to suggest infection, yet the serologic tests for syphilis is reactive. All cases of syphilis are latent at some time during the course of an untreated infection. The **early** latent stage of syphilis is defined as latent disease within the first year after infection. In early syphilis, any period during which primary or secondary symptoms are absent is classified as latent. When more than a year has passed since the patient became infected and there are no signs of disease, we define this period as **late latent**. An **untreated pregnant woman** may transmit syphilis to the fetus regardless of the duration of her disease; transmission is more likely in primary, secondary, and early latent stage than in late latent. Infants born to infected untreated mothers in the secondary stage of infection are almost always infected, conversely, infants born to women with late syphilis may be uninfected. If the mother becomes infected late in the pregnancy, she may show no signs before delivery, and the infected newborn may also appear normal at birth. If a woman has untreated syphilis at delivery, it must be assumed that the infant is infected and must be treated. Adequate treatment for the mother early in pregnancy prevents infection of the fetus. In untreated **late syphilis**, signs and symptoms range from inapparent to symptoms that indicate severe damage to one or more body systems. Late syphilis, also referred to as tertiary syphilis, can be classified as neurosyphilis, cardiovascular syphilis, and late benign syphilis. About ten percent of persons with untreated syphilis develop late syphilis.

Benzathine Penicillin (Bicillin) is the recommended treatment for syphilis. A complete set of STD treatment guidelines are available from the STD Division.



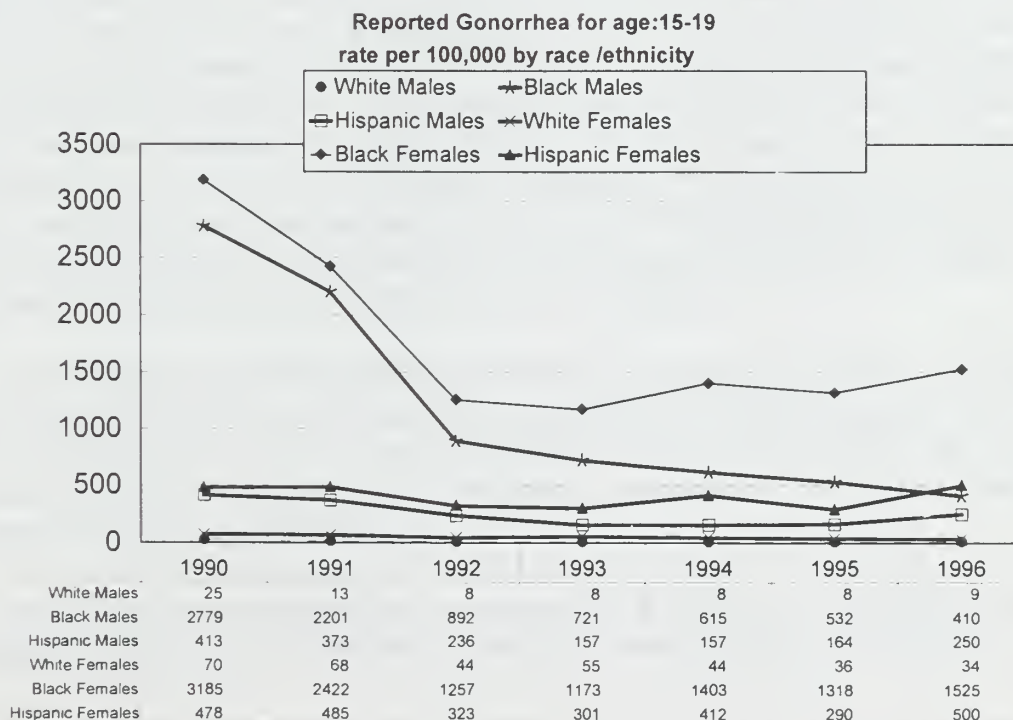
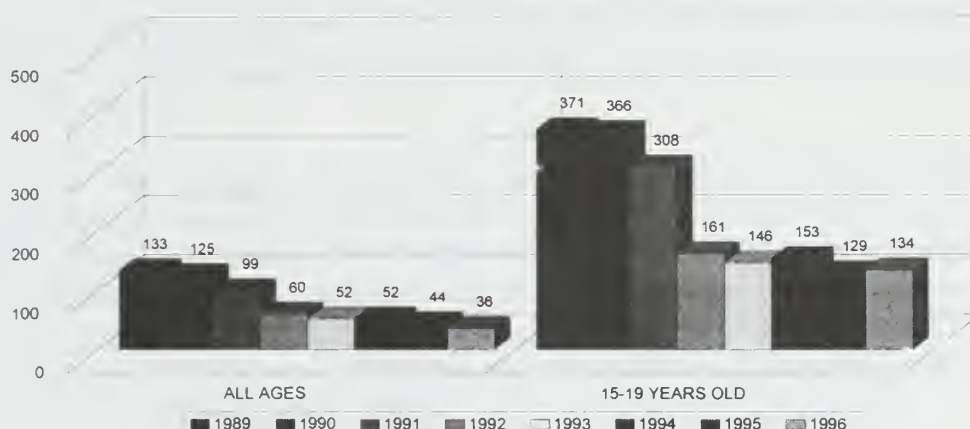
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GONOCOCCAL INFECTIONS

- In 1996, 26% of all gonococcal infections were reported in the 15-19 year old age group (560 of 2161).
- In 1996, the rate of gonorrhea was almost four times higher among the 15 to 19 years old than in the all ages group.
- Rates were higher among women than among men.
- Rates were higher among minority teens

MASSACHUSETTS GONORRHEA RATE PER 100,000



GONORRHEA

In 1995, 392,848 cases of gonorrhea were reported in the United States. In 1996 2,163 cases were reported in Massachusetts. Overall rates are somewhat higher in men and adolescents (15-19 years old) have the highest rates both nationally and in Massachusetts.

In 1879, Albert Neisser demonstrated the etiologic agent, *Neisseria gonorrhoeae*, in stained smears of urethral, vaginal, and conjunctival exudates. Most gonococcal infections remain localized at the site(s) of initial inoculation. Approximately 80 percent to 90 percent of infections remain uncomplicated when patients are treated promptly, but complications develop frequently in patients who do not receive prompt, effective therapy. The gonococcus grows best in warm, moist, nonacidic columnar or transitional epithelium (such as the urethra, cervix, rectum and pharynx). A man's risk of acquiring a urethral infection after a single episode of vaginal intercourse with an infected woman is about 20 percent, but the risk rises to 60 to 80 percent after four exposures. In women who have multiple exposures to men with gonorrheal urethritis, the prevalence of infection is 50 to 90 percent. The risk of transmission from male to female from a single exposure is higher than from female to male.

Symptoms and behavior also influence the transmission of gonorrhea. Most men and women who acquire symptomatic gonorrhea will seek treatment. Many women are asymptomatic or only mildly symptomatic and are less likely to seek treatment, which leads to complications such as pelvic inflammatory, ectopic pregnancy, infertility, or chronic pelvic pain. Because of the acute and long term manifestations of PID, this complication has great impact on public health prevention programs. This is why it is so important to motivate all partners of gonorrhea patients to get an examination and treatment.

The average incubation period is 3 to 5 days, but may range from 0 to 30 days. In men, symptoms include a scanty to profuse mucopurulent discharge, usually with painful and frequent urination. The endocervical canal is the primary site of gonococcal infection in women. The incubation period is uncertain and seems more variable than in men. Most women infected with the gonococcus remain asymptomatic. Women who develop local symptoms do so within 10 days of infection. The most common symptoms in women include increased vaginal discharge, dysuria, and intermenstrual uterine bleeding. Signs and symptoms in women with gonorrhea are sometimes difficult to assess because of the prevalence of coexisting infection with *Chlamydia*, *Trichomonas*, *Candida*, *Bacterial Vaginosis*, herpes simplex, or other organisms. All women should be screened for both gonorrhea and chlamydial when infection is suspected.

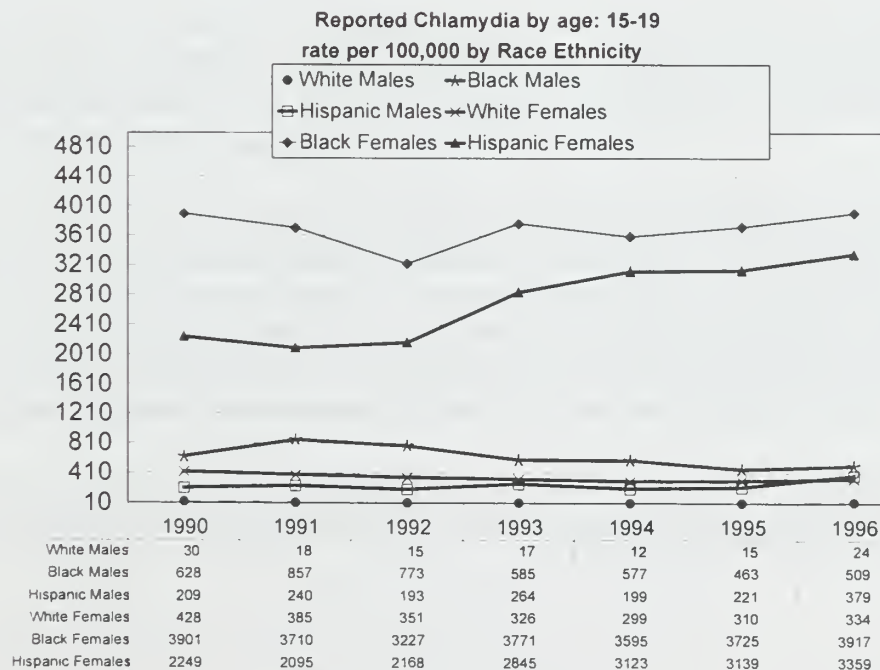
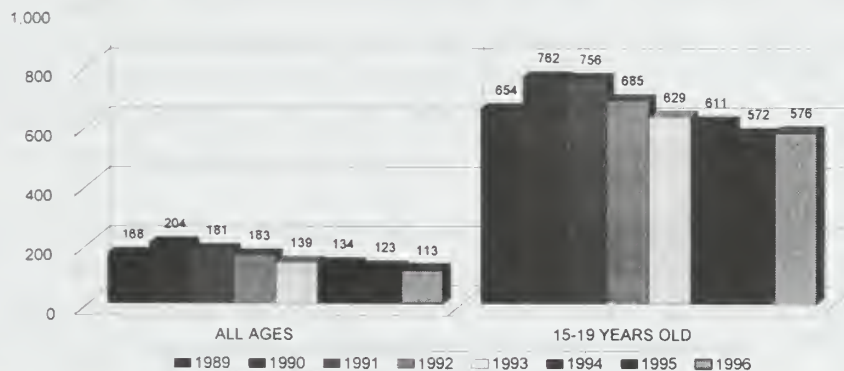
The symptoms of gonorrhea during pregnancy are basically the same as in nonpregnant women except that PID is less common. The complications of urogenital gonorrhea in pregnancy include premature delivery, acute chorioamnionitis, spontaneous abortion, and disseminated gonococcal infection in the mother; ophthalmia neonatorum, pharyngeal infection, and disseminated disease occur in the newborn.

Ceftriaxone is the recommended treatment for gonorrhea. A complete STD treatment guidelines are available from the Division of Sexually Transmitted Disease Prevention.

CHLAMYDIAL INFECTION

- From 1990 to 1996, rates of chlamydial infection decreased 45% in all ages, but decreased only 20% in 15 to 19 year olds.
- In 1996, nearly a third of all chlamydial infection were reported within this age group (2398 out of 6787).
- In 1996, the rates of chlamydial infections were more than 5 times higher in 15 to 19 years old than among all ages.
- Rates were much higher in minority teens.
- Rates were higher among women than men.

MASSACHUSETTS CHLAMYDIA RATE PER 100,000



CHLAMYDIA

In 1996, 6,791 cases of chlamydial infection were reported in Massachusetts. At this time the national figures for chlamydia have not been released. However, in the United States, 477, 638 cases were reported in 1995. True national incidence and prevalence rates are limited by several factors including asymptomatic disease and not all states mandate reporting.

Chlamydiae are unique microorganisms. Like viruses, chlamydiae grow only intracellularly. Unlike viruses, however, chlamydiae contain both DNA and RNA and divide by binary fission. *Chlamydia trachomatis* causes a diverse group of genital and neonatal infections.

In men, *C. trachomatis* may be responsible for 50 percent of cases of **nongonococcal urethritis** (NGU), an STD with an estimated incidence 2.5 times that of gonococcal urethritis. Chlamydia is also responsible for approximately 50 percent of the cases of acute epididymitis seen annually in the United States. Many chlamydial infections of the urethra in men are asymptomatic. The average incubation period is 7 to 21 days. In men, symptoms include a scanty mucoid to watery discharge, usually with painful and frequent urination. NGU can be diagnosed in a male patient if tests for gonorrhea are negative and if the patient has objective evidence of urethritis. The objective evidence includes a visibly abnormal discharge, pyuria defined as more than 10 **polymorphonuclear leukocytes** (PMN) per high dry field in the sediment of a first-voided urine specimen, or more than four PMN per oil immersion field in a gram-stained urethral smear.

Chlamydial infections in women are even more significant. *C. trachomatis* plays an important role in causing **mucopurulent cervicitis** (MPC), acute PID, and maternal and infant infections during pregnancy and following delivery. Infection is frequently asymptomatic, which leads to complications such as pelvic inflammatory, ectopic pregnancy, infertility, and chronic pelvic pain.

Infants whose mothers are infected can acquire a chlamydial infection at birth from contact with infected vaginal secretions. These newborns are at high risk of developing inclusion conjunctivitis and pneumonia. Chlamydia is the most common cause of neonatal eye infections and afebrile interstitial pneumonia in infants under 6 months of age.

The severe impact of sexually-transmitted chlamydial infections, in both human and economic terms, has prompted increased linkages nationally between STD, family planning, and other providers to expand the availability of laboratory screening and clinical treatment services to women. This program began in the Pacific northwest (US Public Health Service Region 10) in the late 1980's. Since then, the prevalence of chlamydia in that area has declined more than 50%. The screening program began in Massachusetts in 1996, so it is too soon to present trend information.

Azithromycin is the recommended treatment for chlamydia. A complete set of STD treatment guidelines are available from the Division of Sexually Transmitted Disease Prevention.

In Massachusetts, sexually transmitted disease continues to affect adolescents and young adults disproportionately. For 15-19 year old black youth in 1995, the rates per 100,000 of syphilis are 11-fold higher than whites (11 vs. 1). The rates for gonorrhea are 22-fold higher (511 vs. 23), and the rates for chlamydia are 13-fold higher (2086 vs. 162), than whites 15-19 years old. A similar comparison can be made for Latino youth whose rate of syphilis in 1995 was 25 cases per 100,000 population, gonorrhea 275 cases per 100,000, and chlamydia 1658 cases per 100,000 population.

Thus disease intervention services and programs promoting and supporting safer behaviors are acutely needed for adolescents and young adults, especially so for minority communities.

**Massachusetts STD Morbidity for age: 15-19
Rate 1/100000 for reported cases by race ethnicity**

Disease	Year	White Male	Black Male	Latino Male	White Female	Black Female	Latino Female
Gonorrhea	1990	25	2779	413	70	3158	478
	1991	13	2201	373	68	2422	485
	1992	8	892	236	44	1257	323
	1993	8	721	157	55	1173	301
	1994	8	615	157	44	1403	412
	1995	8	532	164	36	1318	290
	1996	9	410	250	34	1525	500
Chlamydia	1990	30	628	209	428	3901	2249
	1991	18	857	240	382	3710	2095
	1992	15	773	193	351	3227	2168
	1993	17	585	264	326	3771	2845
	1994	12	577	199	299	3595	3123
	1995	15	463	221	310	3725	3139
	1996	24	509	378	334	3917	3359
Syphilis	1990	3	121	60	4	192	191
	1991	1	99	40	2	268	118
	1992	0	89	21	4	146	59
	1993	0	8	29	2	100	37
	1994	0	53	29	1	92	22
	1995	0	8	0	0	15	51
	1996	0	23	14	3	4	7

YOUTH AT RISK

The following data was extracted from the Massachusetts and the National "1995 Youth Risk Behavior Survey"

IN MASSACHUSETTS

- One half of high school students surveyed reported having had sexual intercourse. Among 9th graders, 31% reported ever having sexual intercourse, rising to 70% by the 12th grade.
- 33% of all sexually experienced students surveyed reported having had sexual intercourse within the last three months.
- 60% of students surveyed who reported ever having had sexual intercourse have had more than one sexual partner, and nearly 15% reported having had four or more sexual partners.
- 52% of students having had sexual intercourse in the last three months reported using condoms the last time they had intercourse. Condom use decreased as grade level increased (from 60% in the 9th grade to 47% in the 12th grade).
- 25% of sexually experienced students who reported drinking heavily reported two or more partners in the past three months versus only 9% of sexually experienced students who did not drink heavily.
- The association between sexual experience and alcohol use was strongest among 9th graders; three times as many 9th grade heavy drinkers were sexually experienced as were compared to light or non-drinkers.
- Among sexually experienced students surveyed, 33% used withdrawal or no contraception the last time they had intercourse.
- In 1995, 28.9 live births occurred per 1000 female residents ages 15 to 19, a decrease of 18% from the 1990 rate of 35.4. The rate per thousand is a function of the number of births to 15-19 year old females in the population during that year. There was a 25% decrease in that population from 1980 to 1990. The peak year for live births was in 1989 when the rate reached 35.9 per thousand. Births to teens (<20 year olds) represented 7.3% of all live births (5,990 out of 81,562) in 1995.

NATIONWIDE, more than half (53.1%) of all high school students had had sexual intercourse. Black male students (81.0%) were significantly more likely than black female students (67.0%) to have had sexual intercourse. Overall, black students (73.4%) were significantly more likely than white and Hispanic students (48.9% and 57.6% respectively) to have ever had sexual intercourse. Black female students (67.0%) were significantly more likely than white female students (49.0%) to have had sexual intercourse, and black male students (81.0%) were significantly more likely than white and Hispanic male students (48.9% and 62.0%, respectively) to have done so. Among female students, the prevalence rates also increased significantly from grade 9 (32.1%) to grades 10, 11 and 12 (46.0%, 66.2%, and 66.0%, respectively); among male students, the prevalence rates increased significantly from grade 9 (40.6%) to grades 11 and 12 (57.1% and 67.1%, respectively). Prevalence rates ranged from 36.3% to 67.6% (median: 48.7%) across the state surveys and from 43.8% to 72.2% (median: 55.8%) across the local surveys.

The percentage of students nationwide who had initiated sexual intercourse before 13 years of age was 9.0%. Overall, male students (12.7%) were significantly more likely than female students (4.9%) to have initiated sexual intercourse before 13 years of age. This significant difference was identified for all the racial/ethnic subgroups. Overall, black students (24.2%) were

significantly more likely than white and Hispanic students (5.7% and 8.8% respectively) to have initiated sexual intercourse before 13 years of age. Black female students (10.4%) were significantly more likely than white female students (3.6%) to have done so, and black male students (41.4%) were significantly more likely than white and Hispanic male students (7.6% and 12.9%, respectively) to have done so. Female students in grade 9 (7.7%) were significantly more likely than female students in grade 12 (3.2%) to have initiated sexual intercourse before 13 years of age. Across the state surveys, prevalence rates varied fivefold from 4.3% to 22.1% (median: 8.7%). Across the local surveys, the prevalence rates varied more than threefold from 6.4% to 22.9% (median: 16.3%).

The percentage of students nationwide who had had sexual intercourse with four or more sex partners was 17.8% (Table 26). Overall, male students (20.9%) were significantly more likely than female students (14.4%) to have had four or more sex partners during their lifetime. This significant difference was identified for black and Hispanic students and students in grades 9 and 10. Overall, black students (35.6%) were significantly more likely than white and Hispanic students (14.2% and 17.6%, respectively) to have had four or more sex partners. Black male and female students (52.2% and 21.7%, respectively) were significantly more likely than white male and female students (15.2% and 13.1%, respectively) and Hispanic male and female students (23.6% and 11.9%, respectively) to report this behavior. Hispanic male students (23.6%) also were significantly more likely than white male students (15.2%) to have had four or more sex partners. Prevalence rates across the state surveys varied more than threefold from 8.4% to 29.9% (median: 16.4%) (Table 27). Prevalence rates across the local surveys varied nearly fourfold from 10.6% to 39.3% (median: 21.7%).

More than one third (37.9%) of students nationwide had had sexual intercourse during the three months preceding the survey (i.e., current sexual activity). Female students in grade 11 (48.1%) were significantly more likely than male students in the same grade (36.8%) to have had current sexual activity. Overall, black students (54.2%) were significantly more likely than white and Hispanic students (34.8% and 39.3%, respectively) to have had current sexual activity. Black female students (50.6%) were significantly more likely than white female students (38.5%) to have done so, and black male students (58.3%) were significantly more likely than white or Hispanic male students (31.6% and 39.2%, respectively) to have done so. Among female students, current sexual activity was significantly more likely among those in grades 11 and 12 (48.1% and 51.9%, respectively) than among those in grades 9 and 10 (22.3% and 35.4%, respectively); current sexual activity was more likely among those in grade 10 (35.4%) than among those in grade 9 (22.3%). Prevalence rates across the state surveys ranged from 21.7% to 50.2% (median 33.3%). Prevalence rates across the local surveys ranged from 23.1% to 53.6% (median 39.1%).

Among students who had sexual intercourse during their lifetime, more than one fourth nationwide (28.5%) had been abstinent during the 3 months preceding the survey. Overall, male students (34.0%) were significantly more likely than female

students (22.5%) to have been abstinent. Prevalence rates across the state surveys ranged from 25.4% to 40.7% (median: 28.8%) and across the local surveys from 25.7% to 36.9% (median: 29.6%).

CONDOM USE

Among current sexually active students nationwide, 54.4% reported that either they or their partner had used a condom during last sexual intercourse. Overall, male students (60.5%) were significantly more likely than female students (46.6%) to report that a condom was used. This significant difference was identified for Hispanic students and students in grades 10 and 12. Overall, black students (66.1%) were significantly more likely than white and Hispanic students (52.5% and 44.4%, respectively) to report that a condom was used. Black female students (60.5%) were significantly more likely than white (48.0%) and Hispanic (33.4%) female students to report that a condom was used during last sexual intercourse. Black male students (71.6%) were significantly more likely than white male students (57.5%) to report this behavior. Female students in grade 9 (58.5%) were significantly more likely than female students in grade 12 (43.1%) to report that a condom was used. Prevalence rates across the state surveys ranged from 29.7% to 64.6% (median: 53.7%) and across the local surveys from 45.5% to 69.1% (median: 62.4%).

ALCOHOL AND DRUG USE AT LAST SEXUAL INTERCOURSE

Nationwide, among students who are currently sexually active, one fourth (24.8%) reported that they had used alcohol or drugs at last sexual intercourse. Overall, male students (32.8%) were significantly more likely than female students (16.8%) to report this behavior. This significant difference was identified for white and black students and students in grades 9, 10, and 12. Prevalence rates varied nearly fivefold from 8.7% to 35.4 (median: 24.1%) across the state surveys and ranged from 12.2% to 27.5% (median: 20.1%) across the local surveys.

PREGNANCY

Nationwide, 6.9% of students reported that they had been pregnant or gotten someone pregnant. Overall, black and Hispanic students (14.8% and 12.5%, respectively) were significantly more likely than white students (4.0%) to have been pregnant or gotten someone pregnant. Prevalence rates varied threefold from 3.6% to 11.5% (median: 6.1%) across the state surveys and varied threefold from 5.8% to 18.9% (median: 10.2%) across the local surveys.

HIV EDUCATION

Nationwide, 86.3% of all students had been taught about acquired immunodeficiency syndrome (AIDS) or HIV infection in school. Prevalence rates ranged from 79.0% to 96.3% (median: 89.8%) across the state surveys and from 79.7% to 93.8% (median: 88.8%) across the local surveys.

Nearly two thirds (63.2%) of students nationwide had talked about AIDS or HIV infection with a parent or other adult family member. Overall, female students (69.9%) were significantly more likely than male students (57.1%) to report having done so. This significant difference was identified for all the racial/ethnic and grade subgroups. Overall, black students (73.4%) were significantly more likely than white and Hispanic students (62.1% and 61.5%, respectively) to have talked with an adult or other family member about AIDS or HIV infection. Black female students (77.4%) were significantly more likely than white female students (68.5%) to have talked with a parent or other adult family member about AIDS or HIV infection, and black male students (68.4%) were significantly more likely than white (56.4%) or Hispanic male (53.9%) students to have done so. Across the state surveys, prevalence rates ranged from 51.8% to 78.3% (median: 64.1%). Across the local surveys, prevalence rates ranged from 55.4% to 77.0% (median: 68.2%).

MINORITY TEENS AT RISK

The problem of higher rates of STD among difficult to reach adolescents and young adults in economically deprived communities requires intensive disease intervention strategies focused on promotion of health seeking and promoting behaviors. Inner cities in the United States are composed of complex and diverse populations that are continuously changing in response to the economic, social, and political climate of the larger society. Inner cities are not homogeneous. Rather, the inner cities include populations of both people with power and people who perceive themselves as powerless; and are often economically disadvantaged, multiracial, and multicultural. The composition of the inner cities around the country has changed dramatically even in the last 10 years. With the movement of middle class minorities to the suburbs, poverty has become even more concentrated. Crime, substance abuse and AIDS are taking a heavy toll on our inner cities. In the face of these changes, the need for improved health status and healthier lifestyles of inner-city residents continues to grow.

SUMMARY

Abstinence is the only effective measure that prevents sexually transmitted diseases, including HIV infection. The annual school-based survey and STD morbidity data presented in this report clearly indicate that risky sexual behavior is prevalent among all teens. Sound public health disease prevention strategies require a two-pronged approach to the problem. (1) Abstinence should be promoted as an integral part of a holistic healthy lifestyle choice for adolescents; and, (2) all the tools necessary for those teens who are sexually active to remain disease free must be provided. Education promoting avoidance of drug and alcohol use will further enhance the promotion of abstinence and sound judgment about risky sexual behaviors.

Adolescence is a period in life that is characterized by risk-taking and a sense of invulnerability. Teens typically have trouble anticipating or preventing potentially harmful consequences. During those years, self-expression,

experimentation, independence and peer acceptance are very important. All of these factors, in combination with increased physical susceptibility, make teens particularly at risk for all STD's including HIV. Information should be available on the risks of sexual activity and methods of preventing infection in teens who cannot be persuaded to abstain from sexual intercourse. Sexually active adolescents must be encouraged to use condoms for prevention of STD for every sexual encounter . They must be made aware that many STDs are asymptomatic but may still cause damage and can still be transmitted. Finally, they should have access to confidential, non-judgmental and sensitive health care that includes STD services where they feel comfortable discussing issues surrounding sexuality. Collaboration between public health professionals, community leaders and health care providers is essential in addressing the problem of adolescents at risk.

The goal of the STD Prevention Division is to reduce the incidence of STD's and HIV infection in adolescents through surveillance, community and provider education, disease intervention, clinical services for diagnosis, treatment, patient education, and counseling toward behavioral risk reduction. Successful interruption of disease transmission both at the individual and community levels requires a collaborative effort among public and private health care providers to maximize available resources. This Division is committed to maintaining and enhancing that course of action.

NOTES

All rates were calculated on the basis of the 1990 national census data for Massachusetts. Using reported morbidity, age, sex, race and ethnicity when specified in case reports, and the total adolescent population by age, sex and race/ethnicity rates per hundred thousand were calculated.

The morbidity rates apply to sexually active teens who represent approximately 50% of all adolescents. If rates were adjusted to represent sexually active teens, then disease rates for those at risk would be up to two times higher than the population-based rates.

Data for race and ethnicity were compiled using the reported cases with these data available. If information as to the race/ethnicity was not included cases were apportioned to categories according to the distribution of morbidity. thus absolute numbers of cases would be higher, but proportions would remain the same.

Cases are reported both by laboratory test and clinical diagnosis by health care providers. Reporting data may be influenced by access to and use of laboratory testing. For instance, cases of nongonococcal urethritis or mucopurulent cervicitis may be diagnosed and treated but not reported because testing for chlamydia was not performed. Furthermore, chlamydia screening in asymptomatic persons is done much more frequently in women than men. This affects morbidity reported by sex for 15-19 year olds in 1996 (2153 cases of chlamydia reported in females vs. 245 in males).

Finally, reporting bias is always a concern in regards to this data. Although the personal nature of surveillance data affects many areas, this may be more of a problem for STD because of the intimate nature of the information. some providers may therefore be less likely to report STD cases. A large investment in laboratory reporting, as an adjunct to provider reporting, has helped to diminish the extent of this bias. The sensitivity of STD surveillance has improved dramatically as more laboratories joined the reporting network. The people we are least likely to hear about are those who, for whatever reason, do not go to a health care provider at all for STD-related care. This underscores the importance of our efforts to ensure that such clinical services are available and are as barrier-free as possible. The next group we are least likely to hear about are those treated presumptively without benefit of any laboratory tests to confirm a diagnosis.

